



What AIs do they need and what are they concerned about?

- Voices of ECE Teachers from Social Media Platforms

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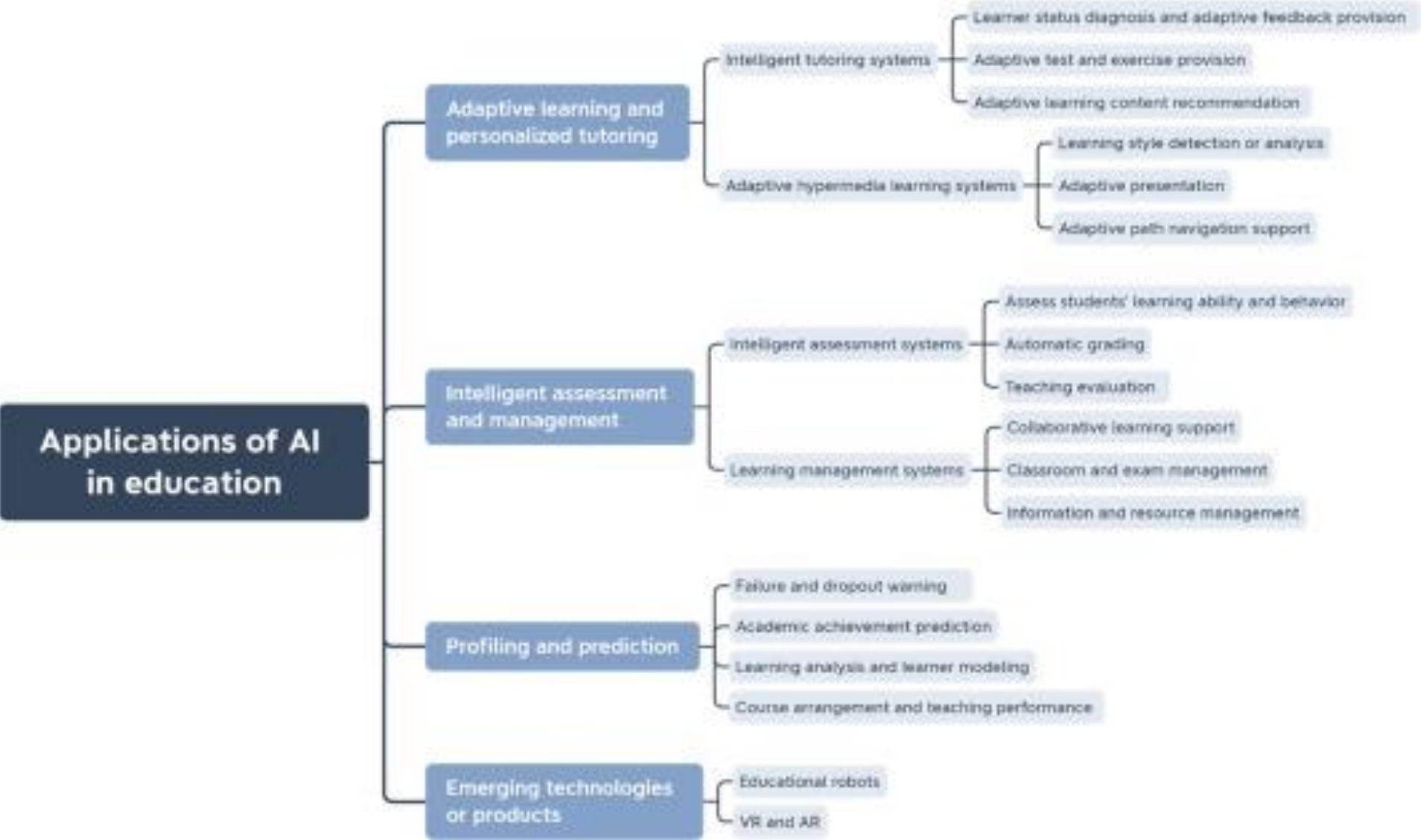
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# What is AI?

- ▶ In 1956, artificial intelligence (AI) was defined as “the science and engineering of creating intelligent machines” (McCarthy, 2007).
- ▶ AI refers to the science and engineering of making intelligent machines that solve different kinds of problems via natural language processing, neural network and machine learning (Mondal, 2020).
- ▶ AI – based technology
  - ▶ AI in your everyday life
    - ▶ Grammarly
    - ▶ Siri & Alexa

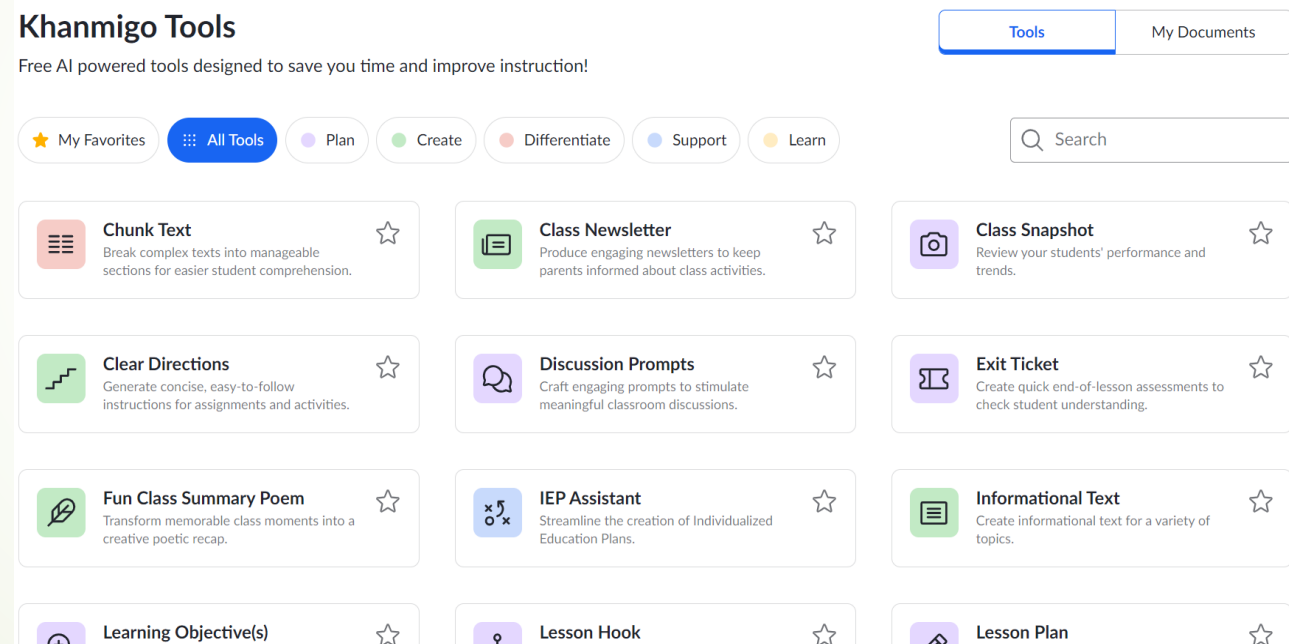
# AI in Education



From Wang et al., (2024) Artificial intelligence in education: A systematic literature review

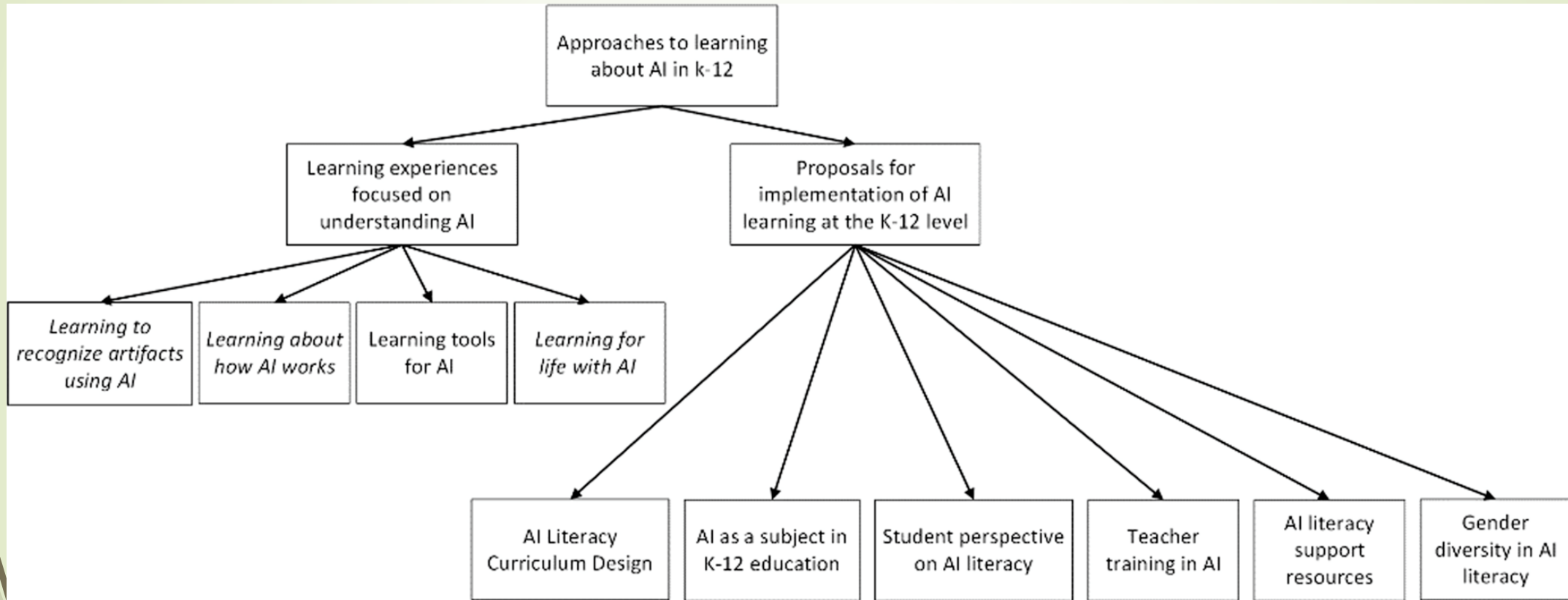
# Examples you may know or use

- Khan Academy offers Khanmigo, an AI tutor harnessing GPT-4 capabilities, delivering personalized learning support and intelligent feedback across various subjects, including mathematics, programming, and language learning.  
<https://www.khanacademy.org/teacher/khanmigo-tools>



- Duolingo, a language learning platform, uses sophisticated AI systems to improve learner experiences (Bicknell et al., 2023).

# AI Education



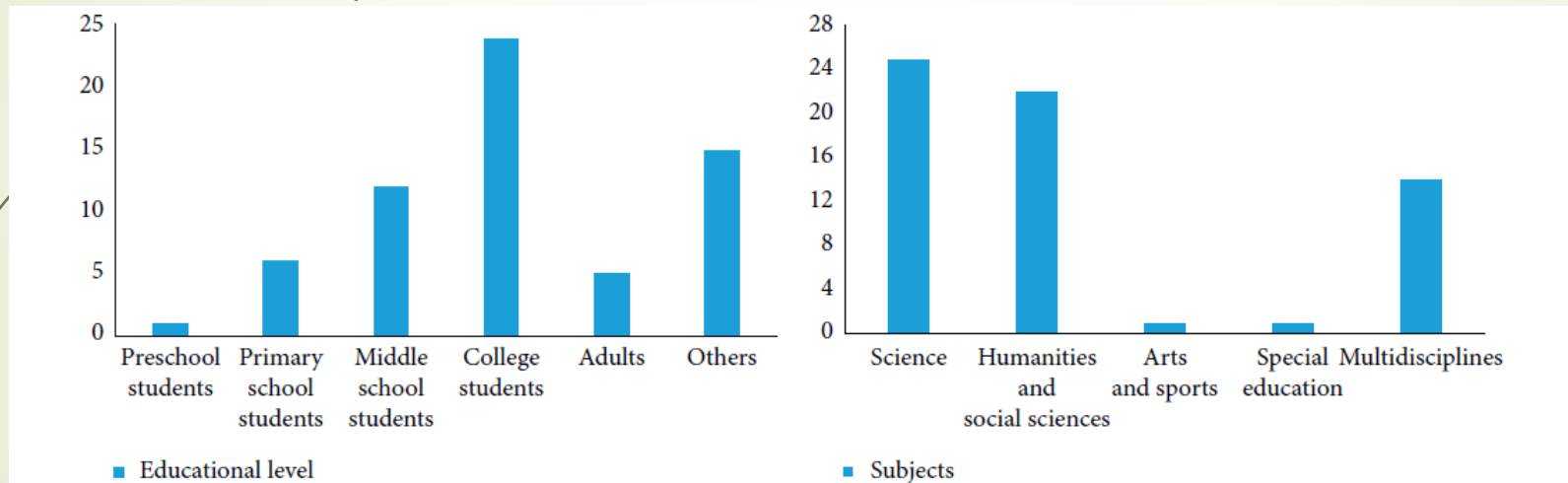
**Lorena Casal-Oter et al. (2023). AI literacy in K-12: a systematic literature review**



# AI and Early Childhood Education (ECE)

- Sparse research in AI use in ECE

- Most AI in education research studies focused on adults (college students) or secondary school students (<https://onlinelibrary.wiley.com/doi/epdf/10.1155/2021/8812542>)

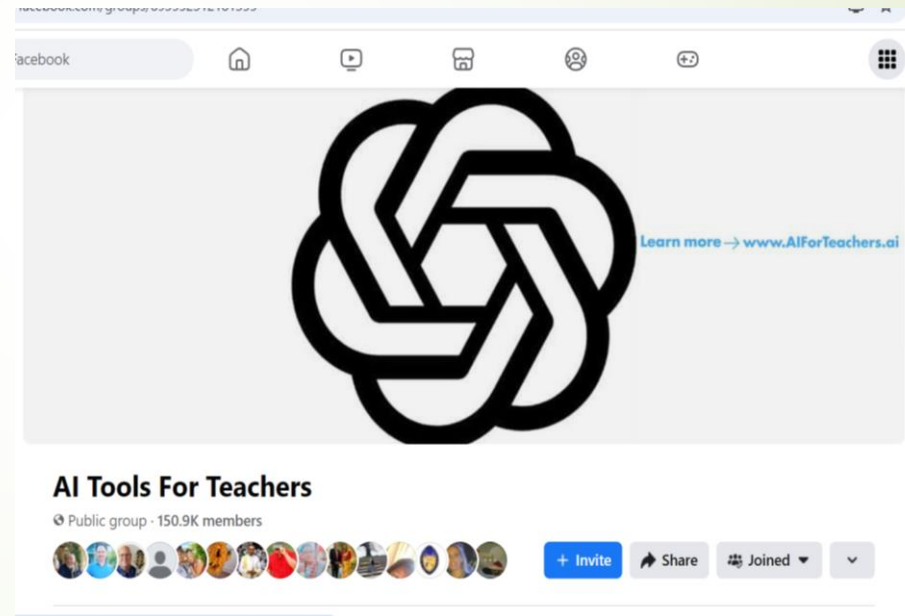
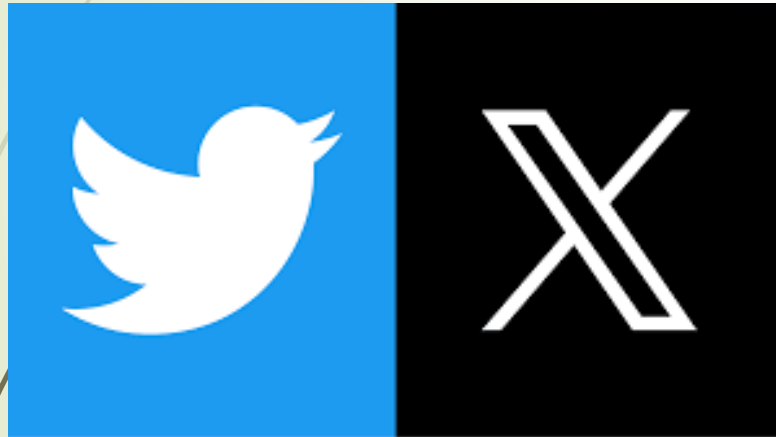


- More research in AI education/AI literacy development during early childhood

- A scoping review was conducted to examine the thematic and content analysis of 16 empirical papers on AI literacy during ECE published from 2016 to 2022 (Su et al, 2024)

# The Present Study

What do P12 teachers, including ECE teachers, talk about AI in social media?



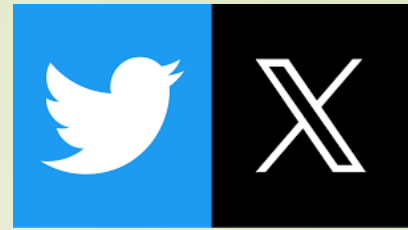


# Method

- ▶ Facebook “AI Tools for Teachers” public group
  - ▶ 1828 posts retrieved from April – August 2024 after initial cleaning.
  - ▶ Posts that only includes greetings were removed (e.g. “hello everyone”!)
  - ▶ Managers’ posts welcoming new members & asking for self-introductions were removed.
- ▶ Twitter/X
  - ▶ Searched hashtag “AI Education” with API basic.
  - ▶ 339 posts during the week of 8/25 – 9/1
  - ▶ 285 posts during the week of 9/2 -9/9
  - ▶ 253 posts during the week 9/10 – 9/17
  - ▶ 401 posts retrieved during the week of 9/18- 9/25



# Results: Twitter

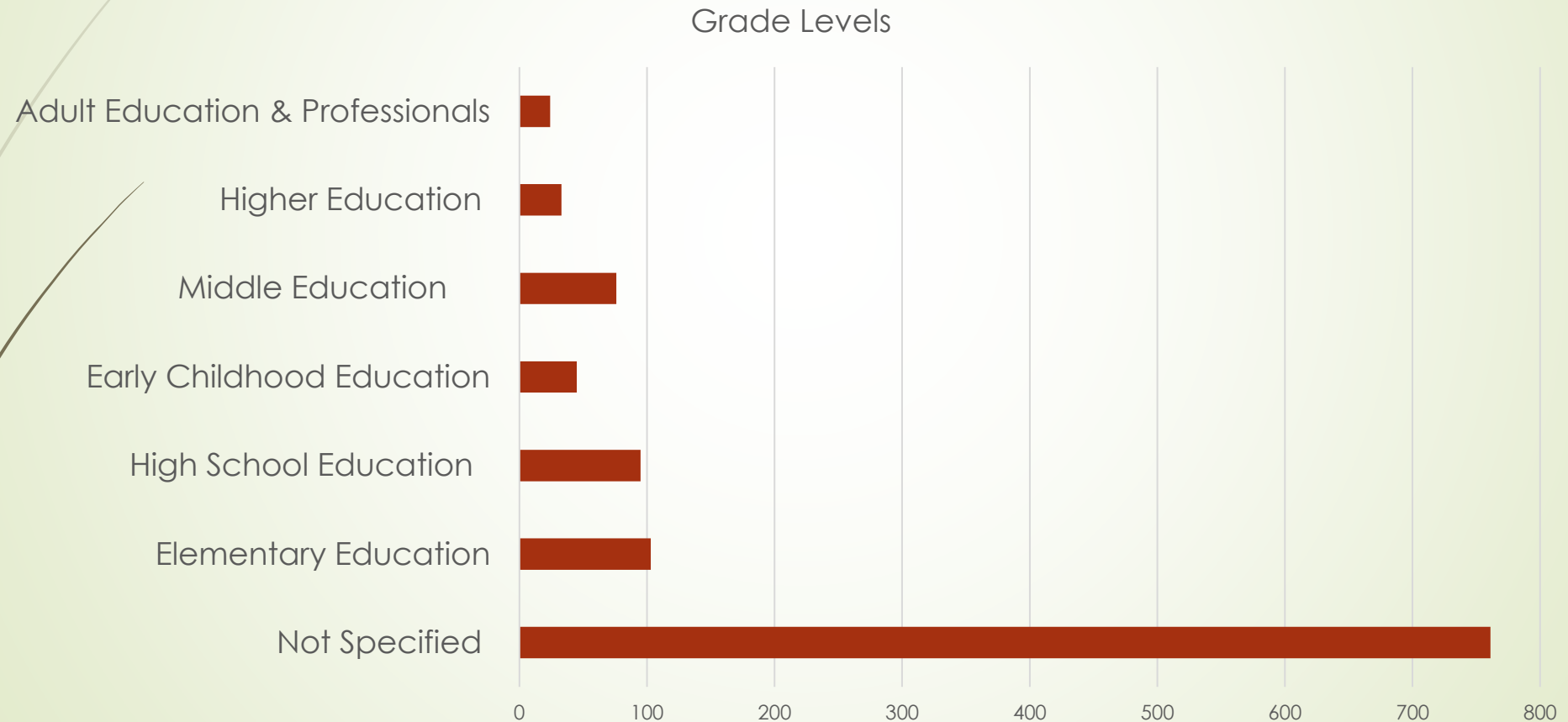


Education	914 tweets
Technology Innovations	148 tweets
Company	75 tweets
Advertising	42 tweets
Other	97 tweets

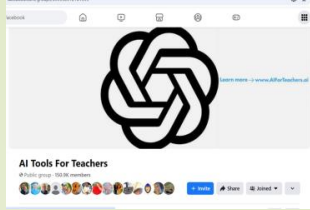
- Primary Education AI Applications
  - Personalized Learning: AI is being used to tailor learning experiences to individual needs.
  - Automated Assessments: AI tools are helping automate assessments, saving time.
  - Online Teaching Platforms: AI enhances online platforms, improving engagement and learning experiences.



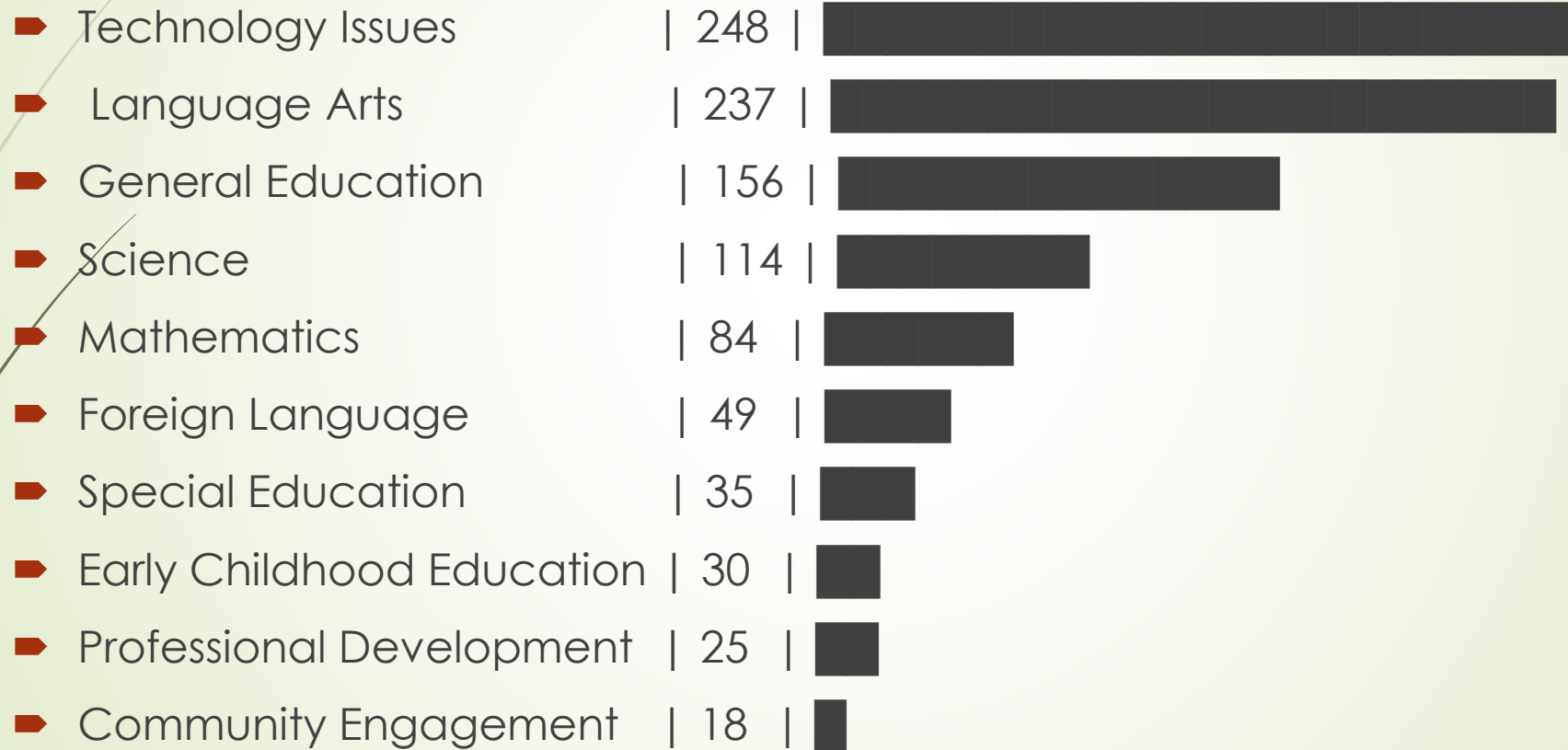
# Who are interested in AI tools in Education



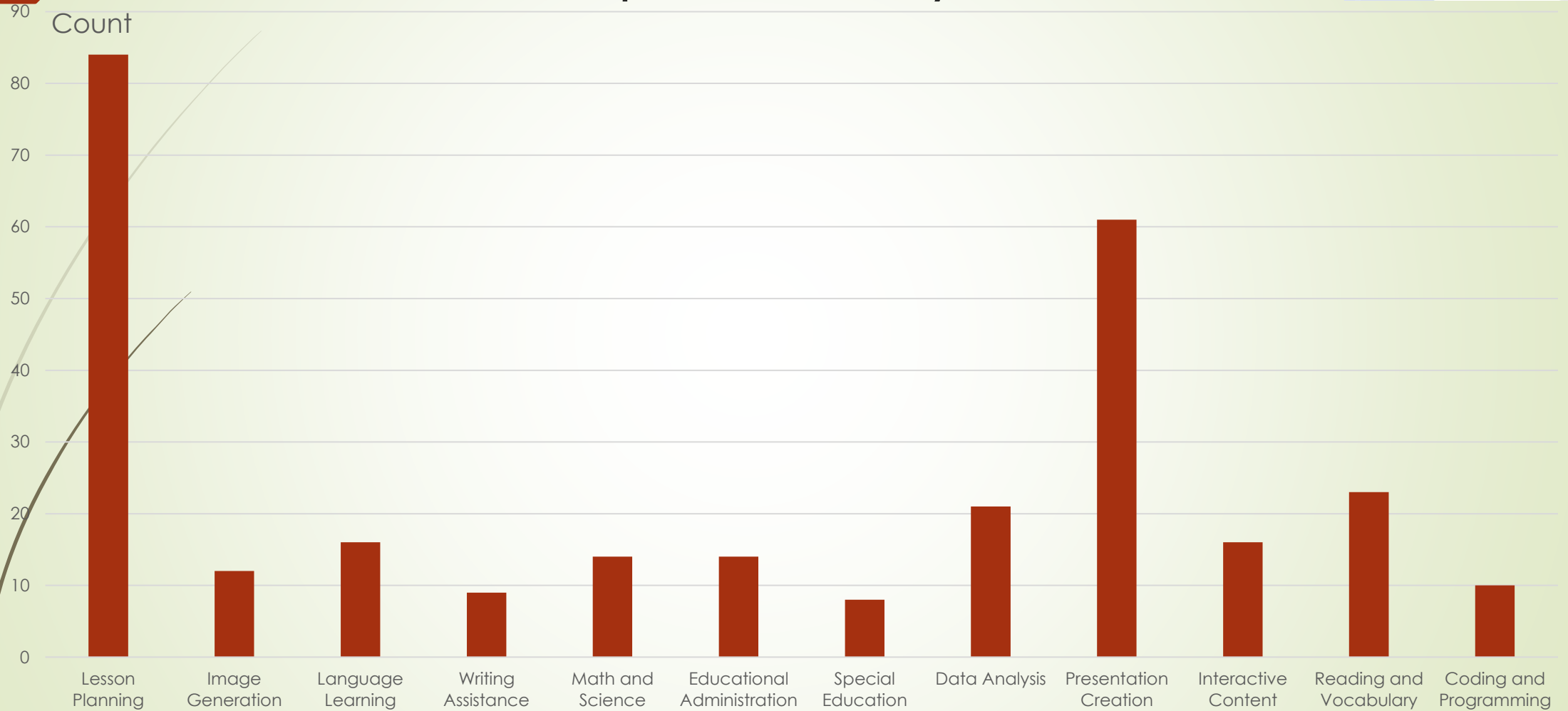
# What topics do teachers navigate about AI and Education?

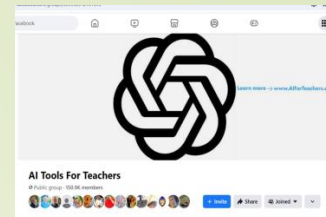


## TOP 10 Topic Categories

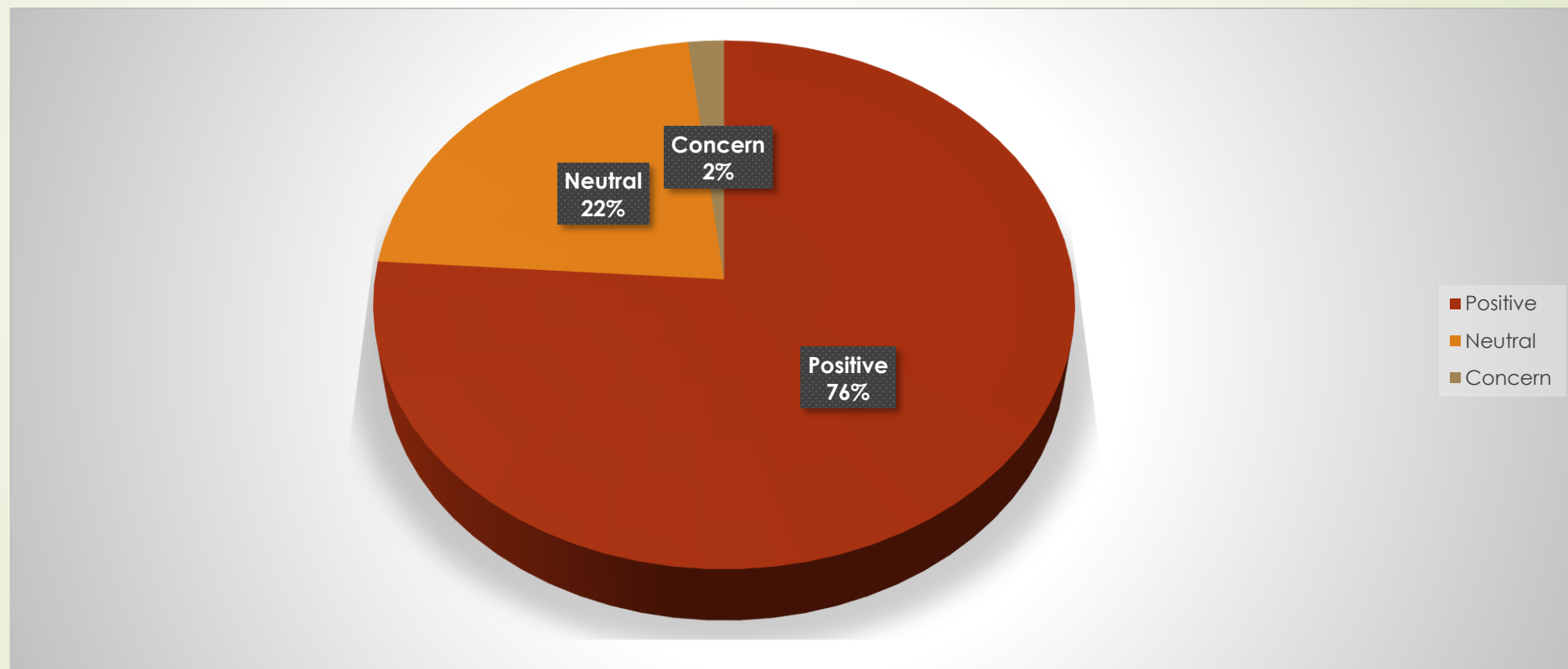


# AI Tools Requested by Teachers



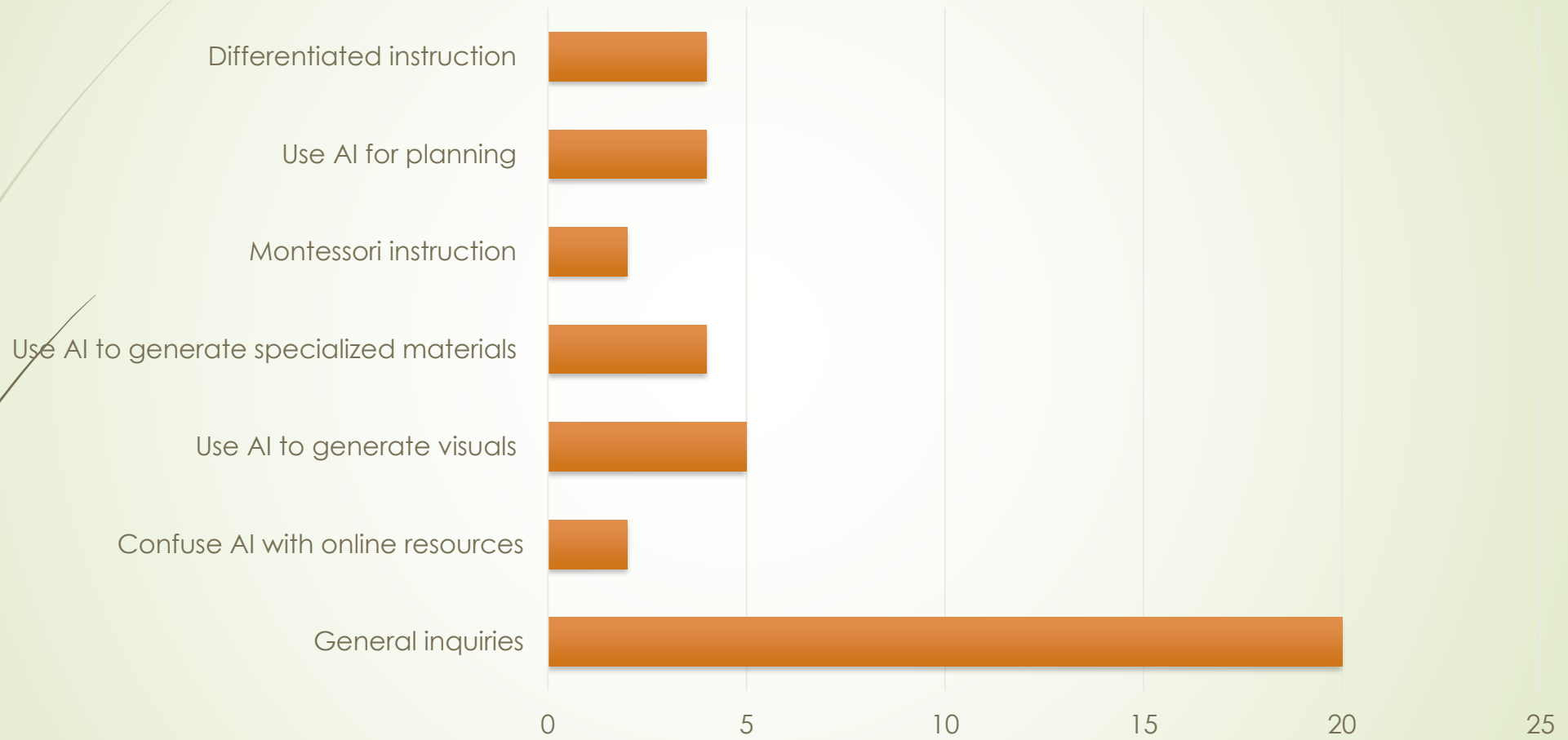
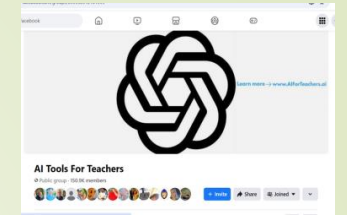


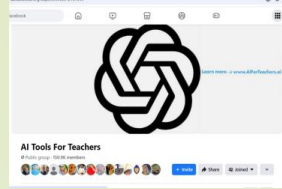
# Teachers' Attitude toward AI in Education





# Early Childhood Educators' AI Discussions





## Seeking General AI Knowledge

"Hello everyone! I teach kindergarten. I look forward to sharing ideas and learning creative ways to incorporate AI into my classroom."

- ▶ Hello I'm a 2nd grade teacher in South Texas! Looking to save time with AI, while creating engaging lessons for my students
- ▶ What is the best AI tool I can use for kindergarten teaching ?
- ▶ Hi everyone my name is Mina I'm a Prek/Kindergarten Teacher happy to be here I recently joined the group. I would like to know what are best AI tools to use for Preschool and Kindergarten? Thanks in advance (3 responses)
- ▶ I'm new the group would this group benefit me as ECD teacher?
- ▶ Hi! I'm new to this group. I recently joined because I want to find ways to use AI to save time and mental energy in my grade 1 classroom this year!
- ▶ Assalam Alaikum everyone, how to use AI tools for preschoolers?
- ▶ **Confuse AI with regular online resources**
  - ▶ Hello everyone, wanted to ask about the website or app which provides free resources for preschool classes, bulletin boards decoration resources, according to english, maths topics (3 reponses)
  - ▶ New to AI. How do you assist? How can my school access early childhood teachers' guides, syllabus, and student resource books? Thanks



► **Use AI to generate visuals or generate stories based on visuals**

- Hello fellow teachers, I wanted to ask if there is a free app or free website I can use to generate AI videos for my students in grade 3. I would really appreciate it.
- Does anyone know of an AI tool that will write a kindergarten level story based on photos submitted?
- What's your favorite AI for creating pictures for story boards or as visual aids for kindergarten?
- how can i create a simple colouring page for kindergarten students out of an image, is there a way I can control the details of an line art image that is generated
- Hi! I'm writing custom decodable stories for my students and I want to add some cute graphics. Are there any AI tools that you'd recommend other than Bing

► **Create materials specialized for young children (e.g., decodable books)**

- Does anyone know of a AI website that creates a worksheet for you? I need it for a kindergarten grade level where there is room for them to draw picture at the top
- Is there a way to have AI/Imagegpt create decodable books for Kindergarten? Like where I print and staple to make a book?
- Hi all! I just wanted to introduce myself and share a photo I took in my local town. I have been teaching 29 years, mostly kindergarten and grade 1. I currently teach grade 1. I am hoping to learn more about A.I. & how it can assist with providing language content (e.g. decodable passages, songs, poems and jingles ) that address specific learning areas (e.g. digraphs, r-controlled vowels) for small group instruction.
- Hi! I'm writing custom decodable stories for my students and I want to add some cute graphics. Are there any AI tools that you'd recommend other than Bing

► **Hi teachers in the group, how concerned are you about your students using AI for completing homework? How are you dealing with it? of algorithmic calculations.** (86 responses)

- **It is Ok to allow students to use AI.** “Not concerned they are learning regardless.” Not concerned at all. I think it's good for them to figure out how the technology can best be used.”
- **Use technology to check the time student spend:** “use Google Docs, you can look at version history to see how many times the document was edited” “a chrome extension called revision history that allows you to see the amount of time spent on the doc.
- **AI detector**” “I normally used AI to check their work.” “MagicSchoolAi has an AI resistant project generator” “Turnitin to detect plagiarism”
- **Judge based on your knowledge of the student:** “And I know my students ability, so it's clear when their work is almost too perfect.”
- **Do not assign homework.** “I try to stamp comprehension questions in class so they aren't likely to go home and google or AI” I don't give much homework” “We need to start rethinking homework. Instead, have them do an exit ticket or an opening ticket on paper in class or in a Google form live in class.
- **Ban technology.** I think we're going to see teachers go back to old-school assessments during school without technology
- **Concerned but do not know how to manage.** “Was not happy with it while used by weak student. He used to answer sheets of paragraph writing and it was clear he just cheated ... Hope to find suitable ways convincing them using it as ideas generator or sth” “I'm more concerned about the ones that aren't using it to be honest.”





# Summary

- ▶ The largest category of posts on AI-tools for ALL teachers focuses on technical questions. Only a small number of discussions are related to early childhood education.
  - ▶ The largest category of posts in early childhood AI discussions focus on general inquiries and lack of in-depth technical discussions, suggesting early childhood teachers' lack of expertise and experiences in AI.
- ▶ The largest two categories of AI tool requested by ALL teachers are AI for (a) lesson planning and (b) presentation generation, followed vocabulary, data analysis, and language learning
  - ▶ In addition to common AI function such as planning, reading and language education,, early educators requested some AI tools that specifically for young children, including AI tools that generate visuals or generate age-appropriate stories based on visuals, generating decodable reading materials, & Montessori instruction.
- ▶ 78% of ALL teachers hold a positive attitudes towards AI use in education.
  - ▶ 100% of AI discussions on early childhood education hold a positive view.





# Summary (cont')

- ▶ The largest type of teachers concerns about AI use is about academic dishonesty.
  - ▶ Teachers attitudes about students' using AI for HW vary significantly, including banning AI, banning homework, detecting if students used AI, "good thing", and "teaching appropriate use"
  - ▶ This concern is not found in early childhood AI posts.
- ▶ Only a small number of professional development (i.e., teaching teachers to use AI) discussions were found.
  - ▶ More questions on how to conduct PD than resources available for PD.